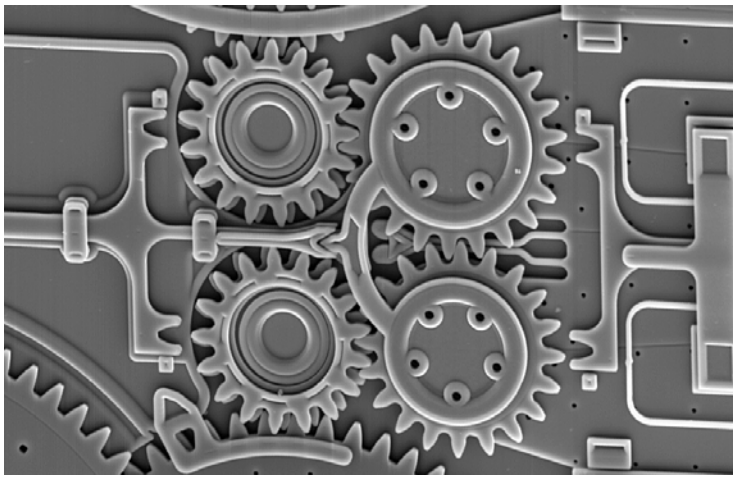
Opportunities and Challenges of MEMS Product Development

Paul McWhorter, **MEMX** (http://www.memx.com)

11:00 AM February 20, 2004 Building 225, Room A362



Abstract:
MicroElectorMechanical Systems (MEMS) generated huge excitement in the mid-1980's with the demonstration of the first functioning Silicon Micromotor. This accomplishment led to wide spread speculation about the potential world-changing impact of this emerging technology. The excitement over MEMS reached its peak during the 1998-2000 telecommunications bubble, with small MEMS-based companies suddenly being purchased for Billions of dollars.

This bubble was followed by a telecom collapse which resulted in a decimation of the MEMS industry. The majority of MEMS start-ups went out of business and major companies closed their MEMS operations.

From this collapse, a few survivors have emerged, including MEMX. This presentation will look at some of the opportunities and challenges remaining in the MEMS field for those companies and Research Institutions that have survived. We will present a description of our work in the SUMMiT V technology, and the opportunities and challenges associated with manufacturability, reliability, and packaging products for emerging applications. The MEMX team is available for individual meetings following the seminar.

About the Speaker: Paul J. McWhorter

Paul McWhorter is one of the pioneering researchers in the field of MEMS. In 1992 he initiated Sandia's Microsystems Program. Under Paul's leadership this initiative advanced the MEMS field by developing cutting edge technology for the integration of sensors, actuators and microelectronics on the same piece of silicon. Paul's work has been recognized with 5 IEEE best paper awards, 2 R&D 100 awards, Industry Week's "Top Technology of the Year" Award, and Science News' Top Development of the Year Award. Paul was named 1998 New Mexico Inventor of the year, and Sandia's Outstanding Corporate Inventor. He has been an avid spokesman for the field of MEMS, and has presented MEMS briefings to a variety of key decision makers, including President Clinton and the US Congress's subcommittee on Science and Technology. He has been featured on the ABC evening news with Peter Jennings, CNN, and publications including Forbes, Fortune, and Business Week.

In October of 2000 Paul left Sandia to form MEMX, a start-up company focused on revolutionary telecommunications products based on MEMS. Paul is presently serving as CTO of MEMX.

Paul, his wife Anna, and 14 year old daughter, Elizabeth, live in Albuquerque, New Mexico. Paul has Electrical Engineering degrees from the University of Texas and Stanford. He enjoys the study of History, and outdoor activities.

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